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The ratio of the particulate to the water by volume in the slurry is between 1:10 to 4:10, and preferably about 2:10. Compressed air enters the slurry by a tube 48 which is connected to inlet 35. A check valve includes a compression spring 50 which urges a ball 52 away from the spring to close off inlet 35 when the air pressure drops below a pre-set limit. This arrangement prevents possible back flow of the slurry into inlet 35 and beyond. Tube 48 extends to near the bottom of reservoir 16 and allows the compressed air to enter the slurry. The air agitates the slurry, creating bubbles and keeping the particulate in suspension. The air bubbles, laden with water and particulate, rise away from the top surface of the slurry as a bubble foam 53 (see US Patent 5,203,698 for more details). The continuing air pressure into reservoir 16 forces the air, water and particulate through outlet 43 and tube 42 to the applicator. Fig. 4 discloses applicator 24 from Fig. 1. Again, the applicator is connected to the slurry reservoir by a flexible tube 22. A fitting 55 secures the tube to outlet 43 of reservoir 16. Tube 22 forms part of a conduit for guiding the air, water and particulate from reservoir 16 to head 25 of the applicator. An on/off flow switch 57 is pressed to allow flow of the air, water and particulate to head 25 and released to disallow flow. The conduit extends through a handle 54 of the applicator to head 25. The conduit then splits and passes through a pair of manifolds 58 which each support a pair of nozzles 56 (only 1 pair is clearly visible). Within each manifold 58 the conduit splits again and connects to the two nozzles on the manifold. The air, water and particulate is ejected from the nozzle(s) in a way to safely remove plaque without damaging any hard or soft oral tissue. A plurality of bristle tufts 60 are also secured to head 25. The bristle tufts are primarily used to guide the placement of nozzles 56 within the mouth, but the bristles can also be used to simultaneously brush the teeth. Accordingly, air, water and particulate can be sprayed primarily onto the teeth and gums to provide enhanced cleaning.

Remarks

The Examiner objected to the disclosure for including an embedded hyperlink and/or other form of browser-executable code. Applicant has amended the disclosure at three locations to resolve this issue.

The specification is objected to for using reference character "34" to designate both a valve and an inlet. Applicant submits herewith a new figure 3 in which the inlet has been labeled 35. The written portion of the disclosure has been amended so that the inlet is identified by reference numeral 35.

The Examiner indicates that the IDS filed with the application on July 12, 2001 did not include copies of each of the items listed on the PTO 1449. Applicant includes herewith a copy of a post-card which applicants submitted with the application. The USPTO returned this post-card to Applicant, indicating the serial number on the card. It can clearly be seen on the post-card that 33 references were submitted with the PTO 1449. Further, in each of the office actions dated 5/24/02 and 10/30/02, the Examiner used at least one of the patents listed on said 1449 in making a rejection of the claims under 35 USC 102 or 103. Applicant submits that if the references were truly not in the file, that the Examiner would have stated this at the time of at least the earlier office action, if not in both office actions. Finally, the 1449 and references were submitted about 20 months ago. If copies of the references were not included 20 months ago, why